

coverage contour of their primary stations, and by FM booster stations. Aural auxiliary stations licensed to low power FM stations will be assigned on a secondary basis; *i.e.*, subject to the condition that no harmful interference is caused to other aural auxiliary stations assigned to radio broadcast stations. Auxiliary stations licensed to low power FM stations must accept any interference caused by stations having primary use of aural auxiliary frequencies.

(b) More than one aural broadcast STL or intercity relay station may be licensed to a single licensee upon a satisfactory showing that the additional stations are needed to provide different program circuits to more than one broadcast station, to provide program circuits from other studios, or to provide one or more intermediate relay stations over a path which cannot be covered with a single station due to terrain or distance.

(c) If more than one broadcast station or class of broadcast station is to be served by a single aural broadcast auxiliary station, this information must be stated in the application for construction permit or license.

(d) Licensees of aural broadcast STL and intercity relay stations may be authorized to operate one or more aural broadcast microwave booster stations for the purpose of relaying signals over a path that cannot be covered with a single station.

NOTE: Applications for aural broadcast microwave booster stations will not be accepted for filing prior to January 1, 1985.

(e) Each aural broadcast auxiliary station will be licensed at a specified transmitter location to communicate with a specified receiving location, and the direction of the main radiation lobe of the transmitting antenna will be a term of the station authorization.

(f) In case of permanent discontinuance of operation of a station licensed under this subpart, the licensee shall forward the station license to the Federal Communications Commission, Broadcast Auxiliary Radio Services,

1270 Fairfield Road, Gettysburg, Pennsylvania 17325 for cancellation.

[28 FR 13716, Dec. 14, 1963, as amended at 49 FR 7129, Feb. 27, 1984; 49 FR 10930, Mar. 23, 1984; 52 FR 31403, Aug. 20, 1987; 55 FR 50693, Dec. 10, 1990; 57 FR 41111, Sept. 9, 1992; 58 FR 19775, Apr. 16, 1993; 65 FR 7649, Feb. 15, 2000]

**§ 74.533 Remote control and unattended operation.**

(a) Aural broadcast STL and intercity relay stations may be operated by remote control provided that such operation is conducted in accordance with the conditions listed below:

(1) The remote control system must provide adequate monitoring and control functions to permit proper operation of the station.

(2) The remote control system must be designed, installed, and protected so that the transmitter can only be activated or controlled by persons authorized by the licensee.

(3) The remote control system must prevent inadvertent transmitter operation due to malfunctions in circuits between the control point and transmitter.

(b) Aural broadcast auxiliary stations may be operated unattended subject to the following provisions:

(1) The transmitter shall be provided with adequate safeguards to prevent improper operation of the equipment.

(2) The transmitter installation shall be adequately protected against tampering by unauthorized persons.

(3) Whenever an unattended aural broadcast auxiliary station is used, appropriate observations must be made at the receiving end of the circuit as often as necessary to ensure proper station operation. However, an aural broadcast STL (and any aural broadcast microwave booster station) associated with a radio or TV broadcast station operated by remote control may be observed by monitoring the broadcast station's transmitted signal at the remote control or ATS monitoring point.

(c) The FCC may notify the licensee to cease or modify operation in the case of frequency usage disputes, interference or similar situations where

**§ 74.534**

such action appears to be in the public interest, convenience and necessity.

(Sec. 318, 48 Stat. 1089, as amended by sec. 1, 74 Stat. 363; 47 U.S.C. 318)

[28 FR 13716, Dec. 14, 1963, as amended at 47 FR 55936, Dec. 14, 1982; 49 FR 7130, Feb. 27, 1984; 50 FR 32417, Aug. 12, 1985; 50 FR 48599, Nov. 26, 1985; 60 FR 55483, Nov. 1, 1995]

**§ 74.534 Power limitations.**

(a) for operation in the 944-952 MHz band:

Aural broadcast STL and intercity relay stations will be licensed with a power output not in excess of that necessary to render satisfactory service. The license for these stations will specify the maximum authorized power. The operating power shall not be greater than necessary to carry on the service and in no event more than 5 percent above the maximum power specified. Engineering standards have not been established for these stations. The efficiency factor for the last radio stage of transmitters employed will be subject to individual determination but shall be in general agreement with values normally employed for similar equipment operated within the frequency range authorized.

(b) For stations operating in bands above 17.7 GHz, the transmitter output power shall be limited to that necessary to accomplish the function of the system. Further, the output power of a transmitter on any authorized frequency shall not exceed the following:

(1)

Frequency band (GHz)	Maximum transmitter output power (watts) <sup>1</sup>
17.7 to 19.7 .....	10.0
31.0 to 31.3 .....	0.05

<sup>1</sup> Peak envelope power.

**47 CFR Ch. I (10-1-00 Edition)**

(2)

Frequency band (GHz)	Maximum allowable EIRP (dBW)
17.7 to 18.6 .....	+55.0
18.6 to 18.8 .....	+35.0
18.8 to 19.7 .....	+35.0
31.0 to 31.3 .....	No limit

[50 FR 4658, Feb. 10, 1985, as amended at 50 FR 7341, Feb. 22, 1985]

**§ 74.535 Emission and bandwidth.**

(a) For frequency modulation, the mean power of emissions shall be attenuated below the mean transmitter power (P) in accordance with the following schedule:

(1) On any frequency removed from the assigned frequency by more than 50% and up to 100% of the authorized bandwidth: at least 25 dB.

(2) On any frequency removed from the assigned frequency by more than 100% and up to 150% of the authorized bandwidth: at least 35 dB.

(3) On any frequency removed from the assigned frequency by more than 150% of the authorized bandwidth: at least 43 + 10 Log(P) dB.

(b) For all emissions except frequency modulation, the peak power of emissions shall be attenuated below the peak envelope transmitter power (P) in accordance with the following schedule:

(1) On any frequency 500 Hz inside the channel edge up to and including 2500 Hz outside the same edge, the following formula will apply:

$$\text{Attenuation} = 29 \text{ Log} \left( \frac{25}{11} \left( D + 2.5 - \frac{W}{2} \right)^2 \right) \text{ dB}$$

or 50 dB whichever is the lesser attenuation. Where: D is the displacement frequency (kHz) from the center of the

authorized bandwidth; and W is the channel bandwidth (kHz).